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**§ 84.1155 Filters used with canisters and cartridges; location; replacement.**

(a) Particulate matter filters used in conjunction with a canister or cartridge shall be located on the inlet side of the canister or cartridge.

(b) Filters shall be incorporated into or firmly attached to the canister or cartridge and each filter assembly shall, where applicable, be designed to permit its easy removal from and replacement on the canister or cartridge.

**§ 84.1156 Pesticide respirators; performance requirements; general.**

Pesticide respirators and the individual components of each such device shall, as appropriate, meet the following minimum requirements for performance and protection:

(a) *Breathing resistance test.* (1) Air-flow resistance will be measured in the facepiece, mouthpiece, hood, or helmet of a pesticide respirator mounted on a test fixture with air flowing at a continuous rate of 85 liters per minute, both before and after each test conducted in accordance with paragraphs (c) and (f) of this section.

(2) The maximum allowable resistance requirements for pesticide respirators are as follows:

MAXIMUM RESISTANCE  
[mm. water-column height]

Type of pesticide respirator	Inhalation		Exhalation
	Initial	Final <sup>1</sup>	
Front- or back-mounted gas mask .....	70	85	20
Chin-style gas mask .....	65	80	20
Powered air-purifying <sup>2</sup> .....	<sup>2</sup> 50	<sup>2</sup> 70	20
Chemical Cartridge .....	50	70	20

<sup>1</sup> Measured at end of the service life specified in Table 14 of this subpart.

<sup>2</sup> Resistance of filter(s), cartridge(s), and breathing tube(s) only with blower not operating.

(b) *Facepiece test.* (1) The complete pesticide respirator will be fitted to the faces of persons having varying facial shapes and sizes.

(2) Where the applicant specifies a facepiece size or sizes for his respirator together with the approximate measurements of faces they are designed to fit, the Institute will provide test subjects to suit such facial measurements.

(3) Any pesticide respirator part which must be removed to perform the facepiece fit test shall be replaceable without special tools and without disturbing facepiece fit.

(4) The facepiece or mouthpiece fit test using positive or negative pressure recommended by the applicant and described in his instructions will be used during each test.

(5)(i) Each wearer will enter a chamber containing 1,000 p.p.m. isoamyl-acetate vapor for a respirator equipped with a full facepiece, mouthpiece, hood, or helmet and 100 p.p.m. isoamyl-

acetate vapor for a respirator equipped with a half-mask facepiece.

(ii) The facepiece, mouthpiece, hood, or helmet may be adjusted, if necessary, in the test chamber before starting the test.

(iii) Each wearer will remain in the chamber while performing the following activities:

(A) Two minutes, nodding and turning head;

(B) Two minutes, calisthenic arm movements;

(C) Two minutes, running in place; and

(D) Two minutes, pumping with a tire pump into a 28-liter (1 cubic foot) container.

(iv) Each wearer shall not detect the odor of isoamyl-acetate during the test.

(c) *Silica dust test.* Three completely assembled pesticide respirators will be tested with a mechanical-testing apparatus as follows: